

REPORT OF SURVEY FOR REPAIRS, &c., OF ENGINES AND BOILERS

(Received at London Office 26 OCT 1950)

Date of writing Report 19th October 50 When handed in at Local Office 24th October 1950 Port of SOUTH HAMPTON

No. in Survey held at SOUTH HAMPTON Date First Survey 31-5-48 Last Survey 14-8-48

Reg. Book. 70354 On the Machinery of the Wood, Iron or Steel QUAD. SCR. NEW AUSTRALIA (EX MONARCH OF BERMUDA 49)

Tonnage Gross 22424 Vessel built at NEWCASTLE By whom VICKERS-ARMSTRONG & CO. When 1931 11

Net 12876 Engines made at ERITH BIRMINGHAM By whom FRASER & CHALMERS & GENERAL ELECTRIC CO. When

Nominal Horse Power 4411 Boilers, when made (Main) (Donkey)

No. of Main Boilers 8 Owners M. O. T. Owners' Address

No. of Donkey Boilers 1 Managers SHAW SAVILL & ALBION CO. LTD. (If not already recorded in Appendix to Register Book.)

Steam Pressure 405 LBS. in Main Boilers 405 LBS. in Donkey Boilers Port London Voyage

If Surveyed Afloat or in Dry Dock BERTHS. 26 & 39 (State name of Dock.)

Particulars of Classification (which must be inserted precisely as in Register Book & Supplements).

Last Report No. Port

Particulars of Examination and Repairs (if any) L.M.C. FOR RECLASSIFICATION

(Periodical Surveys, when held, must be reported in detail and verbatim in the terms of the Rules. State clearly the cause of Repairs, if any, and, in detail, the nature and extent of Examinations and subsequent Repairs. Repairs on account of Damage (the cause of which must be stated) should be separated from Repairs due to other causes; and besides being detailed in the body of the report, should be briefly summarised at the end of the report. State also the dates and initials of any letters respecting this case.)

In damage cases where the Surveyor has not made a special damage report he is required to state whether he offered his services for this purpose, and why they were declined.

Was a damage report made by anyone else? If so, by whom?

Did the Surveyor personally go inside each Main Boiler separately and make a thorough examination at this time? YES

" " Donkey " " "

If not, state for what reasons What parts of the Boilers could not be thus thoroughly examined?

What special means, in the absence of internal examination, were adopted by the Surveyor to assure himself of the thorough efficiency of those parts of each Boiler?

State latest date of internal examination of each boiler ALL 6150

Present condition of funnel(s) GOOD

Did the Surveyor examine the Safety Valves of the Main Boilers? YES

To what pressure were they afterwards adjusted under steam? 405 & 390 LBS.

Did the Surveyor examine the Safety Valves of the Donkey Boilers?

To what pressure were they afterwards adjusted under steam?

Did the Surveyor examine all the manholes, doors and their fastenings of the Main Boilers? YES

and of the Donkey Boilers?

Did the Surveyor examine the drain plugs of the Main Boilers?

and of the Donkey Boilers?

Did the Surveyor examine all the mountings of the Main Boilers? YES

and of the Donkey Boilers?

Has the screw shaft now been drawn and examined? YES THEY

Have a continuous liners YES

Is an approved oil retaining appliance fitted at the after end? NO

Has shaft now been changed? YES

If so, state reasons RENEWAL LINERS

Has the shaft now fitted been previously used? NO

Has it a continuous liner? YES

Is an approved oil retaining appliance fitted at the after end? NO

State date of examination of Screw Shaft ALL 10:49

State the wear down in the stern bush 0.006 0.008 0.008

Is electric light and/or power fitted? YES

If so, did the Surveyor examine the generators, motors, switchgear, cables and fuses? YES

Has the insulation resistance of the generators, circuits and apparatus been tested and found to be not less than 100,000 ohms? YES

Engine parts, when referred to by numbers, should be counted from forward.

If the Survey is not complete, state what arrangements have been made for its completion and what remains to be done.

COMPLETE.

Vessel placed in dry dock, examined propellers, sea cocks and valves and outside fastenings.

Four Screw Shafts drawn and examined with their tubes and bushes.

All Intermediate Shafting and bearings examined

Four Thrust Shafts and Blocks examined

The Main Turbine, bearing and Alternator examined.

The Auxiliary Turbo-Generators examined.

The Emergency Generator Engine and Generator opened up and examined.

All Condensers examined and tested.

Main and Auxiliary Feed pumps, Extraction Pumps, (P.T.O.)

General Observations, Opinion, and Recommendation:—

The Machinery of this vessel

(State clearly what alteration, if any, is suggested to be made in the existing classification of the vessel's machinery in the Register Book, consequent upon this survey, and also any alteration required to be made in the records of the vessel's machinery, boilers, working pressures, &c.; thus, for example, BS 9.11, R&MS 9.11 or LMC 9.11 or LMC 140 lb., PD, &c.)

as now seen is in good order and eligible in our opinion to be reclassified as contemplated with fresh record of survey and NOTATION L.M.C. 8:50, & T.S. (64) 10:49.

(Two Electric) 1/2 times L.M.C. 1/4: 0: 0

Survey Fee (per Section 29) 15 L.S. FEE 4: 0: 0

Special Damage or Repair Fee (if any) 80: 0: 0

(per Section 29.) Repair Fee 20: 0: 0

Travelling expenses (if chargeable) 14: -: -

Fees applied for

19

Received by me,

19

FRI. 19 JAN 1951

Committee's Minute

Assigned

J. M. Williams, J. B. Oakes

Engineer Surveyor to Lloyd's Register of Shipping.



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Lloyd's Register

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Main and Auxiliary Circulating Pumps, Lubricating Oil pumps, Fuel Service and Transfer pumps, General Service, Fire and Bilge pumps, Emergency Bilge pump, Hot Fuel and Salt Water pumps all examined.

Water Light Oil Pumps examined, and accumulation tested. C. 20. The Pumping arrangement examined and tried out under working conditions. All Fuel Heaters, Oil Heaters and Calorifiers examined and tested. Air and Oil Coolers examined and tested.

The Main and Auxiliary Steam lines examined and tested. The Windlass, Capstan and Steering Gear (Main & Auxiliary) examined.

All Main Boilers (8) examined in their entirety and hydraulically tested to 600 lbs/sq. inch. Safety Valves subsequently adjusted under steam to pressure stated. Details of fitting in Boilers as per the Chemical Fire extinguishing arrangements are in order.

The Electrical Installation has been examined, and outside the Machinery space has been largely renewed, in this connection a Report 13 has been completed.

Upon Completion of the repairs (shown hereafter) four days sea trials were carried out with satisfactory results.

The Main Turbine Overspeed Governor were tested and found to operate at PORT 3250 RPM. L. STAR 3270 RPM. The Bilge and Ballast systems were tried out including the Bilge Injections and Emergency Bilge pumps and found satisfactory.

The Main and Auxiliary Steering gear and Gyro were tried out and found satisfactory. The Windlass was tried out with satisfactory results. The other auxiliary machinery had been tried out during basin trials and found in order.

REPAIRS NOW EFFECTED.

Screw shafts now fitted
 PORT INNER KNOX NO 587 24/2/31 W.C.
 STAR? " " " " " "
 PORT OUTER " " 19613
 STAR? " " 19613
 SPARE (2) " " 19613
 THE PORT & STAR? OUTER Screw shafts fitted with new liners 10/49
 BOTH SPARE " " " " 9/49
 All eight stern bushes renewed and the four forward and bushes modified in accordance with the plan approved 11/8/49 (Hewith).
 Four new propellers fitted.

PORT INNER R.I.H. 2641 P.M.B. 24/5/49
 STAR? " " " " " " 24/5/49
 PORT OUTER R.I.H. 2640 P.M.B. 17/5/49
 STAR? " " " " " " 17/5/49
 Kape guards all renewed.

The Main and Auxiliary Turbines were opened up and completely overhauled by the builders (Messrs Fraser & Chalmers).

Ballast and General Service Pumps. Impellers, shafts and bearings all renewed. Emergency Generator.

Sudgion pins, Top end bushes and piston rings all renewed.

Oil Fuel Transfer Pumps. Shafts machined and Ball races renewed.

Boilers.

4 Superheater Valves and spindles renewed.
 8 Check Valve seats renewed.
 1180 Generator Tubes renewed
 16 downcomer " "
 1500 Air " "

During preliminary trials one of the 4" bottom row tubes in the Starboard After Boiler in the After Boiler Room burst on account of suspected shortage of water. The burst tube was 12" from Starboard.

As a result of the foregoing all the 4" tubes - the bottom row of this boiler and all the generator tubes in the Star? half were renewed. The Owners Representative then decided to renew the bottom row tubes in all boilers.

Upon completion of the this work the 8 Boilers were retested to 600 lbs/sq. inch hydraulically and found in good order.

ALTERATIONS.

Shipside connections and pipes have been fitted to supply circulating water to the after Turb. Generator when the vessel is in dry dock, in accordance with the plan approved 20/4/49 (Hewith).

The sea connections for Boiler Blow-Downs have been modified in accordance with the plan approved 18/11/49. (Hewith).

The H.P. evaporator blow-down sea connection now fitted as per approved plan 20/5/49 (Hewith).

The Boiler Water Sample Cooler has been installed as shown on the plan approved 18/1/50. (Hewith).

The Fuel Dosage System and Isolating valves have been fitted in accordance with the plan approved 16/11/49 (Hewith).

All material for the above alterations has been tested as required by the Rules.

NOTE. The low level water alarms on the Main Boilers were tied out and whilst working at the time it is not considered that they can be relied upon. *jff*

MAIN BOILER, STEAM DRUM. PITTINGS.			
FORWARD BOILER ROOM.			
PORT FORWARD		STARBOARD FORWARD	
$\frac{1}{4}"$	$\frac{3}{16}"$	$\frac{5}{32}"$	$\frac{5}{32}"$

PORT AFT		STARBOARD AFT	
$\frac{3}{16}"$	$\frac{3}{16}"$	$\frac{3}{16}"$	$\frac{3}{16}"$

AFTER BOILER ROOM			
PORT FORWARD		STARBOARD FORWARD	
$\frac{1}{8}"$	$\frac{5}{32}"$	$\frac{1}{8}"$	$\frac{7}{32}"$
$\frac{5}{32}"$	$\frac{5}{32}"$	$\frac{5}{32}"$	$\frac{7}{32}"$

PORT AFT		STARBOARD AFT.	
$\frac{1}{8}"$	$\frac{1}{8}"$	$\frac{1}{8}"$	$\frac{1}{8}"$

SHOWING DEPTH (MAXIMUM) & APPROXIMATE POSITION OF PITTING IN EACH BOILER DRUM.

jff